

FLATBED SCANNERS

SCAN ARTISTS

Whether you're digitising your old photos or gathering documents for research, you can't beat a dedicated flatbed scanner. We test nine

INTRODUCTION

The scanners integrated in multifunction peripherals (MFPs) can produce decent results, but if you already have a perfectly good printer or you're serious about high-quality imaging, a standalone scanner is just what you need.

We've taken a look at nine scanners designed with various purposes in mind. Two are entry-level models designed for scanning photos and simple documents. Five come with everything you need to scan negatives and slides, making them the perfect way to preserve family albums or produce your own enlargements. We've also looked at a couple of scanners designed to make it easy to copy pages from books without damaging them, which is ideal for students or teachers. Whatever you want to scan, we'll show you how to get the right imaging hardware at the right price.

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Choosing a... Flatbed Scanner

The scanners here range in price from £38 to a few hundred pounds, but choosing the right scanner for your needs involves more than just financial considerations. Before you start looking, you need to work out what you want to scan.

Almost any scanner is capable of capturing basic documents, but if you want to scan photos or illustrations, image quality becomes a lot more important. If you want to scan old film or slides, a high-quality scanner with a high optical resolution is essential. If you need to scan a lot of documents or books, you'll need a fast, flexible scanner with an automatic document feed.

A SATISFACTORY RESOLUTION

A scanner's optical resolution is measured by the number of dots per inch (dpi) the sensor can record. You can think of this as like a digital camera, where having a higher megapixel rating lets you capture more detail. Higher resolutions also result in larger images, so the higher the scanner's dpi, the bigger the enlargement you can make from an original. Remember, though, that any defects in the original document will be enlarged too, so the quality of your source material affects the maximum resolution at which you can scan.

Be careful with these resolution ratings, though. Scanners typically have two dpi ratings, such as 1,200x2,400dpi. Pay attention only to the lower figure, as this is the real resolution of the scanner's sensor; the second figure is based on how many times the moving head stops per inch – so for a 2,400dpi resolution, the head stops 2,400 times per inch. You don't capture any more detail from this, but each point on the document is scanned more than once. The combined results can improve accuracy, detail and colour.

Scanner manufacturers will often quote an interpolated dpi figure, but you can ignore this completely, as this higher figure is achieved by artificially enlarging the image. You could do the same thing in any photo-editing package simply by manually resizing the image.

For standard documents and photos, a scanner with a resolution of 1,200dpi is fine. If you want to scan negatives or slides, you need a scanner with a resolution of at least 2,400dpi, but 3,200dpi or higher is better. Typically, documents should be scanned at a minimum of 100dpi, and photos at 600dpi. Don't forget that increasing the resolution means the scanner takes longer and produces a much larger image – it's easy to get carried away and end up with a 1GB image.



It's also important to remember that a high optical resolution doesn't automatically equal excellent image quality. As with a camera, the quality of the lenses and other parts all have a big effect. We tested all the scanners here with the same film and reflective sources, and found significant differences in quality between scanners with identical quoted resolutions. Our reviews explain which scanners performed well and which were poor.

HEAD LIGHT

Flatbed scanners capture an image by moving a head under the glass platen. The lid holds the document flush against this glass surface, and a light source illuminates it. The light that bounces back from the document is measured by the scanner's sensor, converted to an electrical signal and stored by your PC.

This process doesn't work for transparencies and film, as they don't reflect the light. Instead, you need a scanner with a transparency adaptor, which works by turning off the light under the transparency and shining a light through it from above – similar in concept to an old-fashioned projector. Scanners that support transparencies come with special film and slide holders into which you have to clip your originals. The size of the secondary light defines how many slides you can scan at once. Our table on page 96 tells you which formats each scanner supports, if any, and

how many negatives and slides it can scan at once. If you need to scan a lot of negatives, Canon's CanoScan 8800F is a good choice as it can take 12 35mm frames at once.

As film and slides are so small, they need to be scanned at very high resolutions to capture high levels of detail. This has the downside that any small imperfections, such as dust or scratches, are greatly magnified. Most scanners, such as Epson's Perfection V200 Photo, use software dust and scratch removal techniques. Canon uses its Film Automatic Retouching and Enhancement (FARE) technology in its scanners, which shines an infrared light at film to detect dust and remove it more effectively from the captured image. Our reviews tell you which technique each scanner uses.

MAKE SENSE

Each of the scanners here uses either a charge-coupled device (CCD) sensor or a contact image sensor (CIS) to record the scanned image. CCD sensors are more expensive and require more power, but they can produce higher-resolution images. They also have a wider colour range (or gamut). Film scanners tend to use CCD technology.

CIS technology is cheaper to manufacture, smaller and requires less power. Scanners that use these sensors can be powered by USB and take up a lot less room. Although the image

quality is supposedly inferior to that of CCD sensors, we didn't notice much difference in our tests. Choose a CIS scanner if space is an important factor. Our table tells you which technology each scanner uses.

EASILY RECOGNISED

All the scanners here have built-in control buttons for quick operation. For fine control, though, you'll need to use the scanner's interface software. This is either launched manually or, more likely, accessed directly from within your image-editing software. The interface application offers full control over the area you want to scan and the resolution, as well as advanced options such as dust removal.

Most of the image-editing applications that come free with the scanners aren't much good, although Canon's CanoScan 8800F comes with the excellent Adobe Photoshop Elements 5.0. Every scanner here comes with optical character recognition (OCR) software, which can convert a scanned document into editable text. The software supplied with HP's scanners produced the best OCR results. Our reviews tell you how accurately our test document was converted into text, while our table lists the software included with each scanner.

Unlike most printers, every scanner here comes with a USB cable, so everything you need to get scanning is included in the box.

This month

HP

Scanjet G2410

Page 92



CANON

CanoScan LiDE 90

Page 92



HP

Scanjet G2710

Page 92



EPSON Perfection V200 Photo

Page 93



CANON

LiDE 600F

Page 93



CANON

CanoScan 8800F

Page 93



PLUSTEK

OpticBook 3600

Page 94



AVISION

FB2080E

Page 94



HP

Scanjet 5590

Page 94





HP Scanjet G2410

★★★★

£38 inc VAT

From www.rlsupplies.co.uk

HP's Scanjet G2410 is the cheapest scanner here, which makes it easier to forgive its drab looks and the way the lid's hinges lift out of their runners so easily. The low price also means it comes with only HP's Solution Center software. This lets you launch the scanner interface application, configure the functions of the scanner's Scan and Copy buttons, sort your scanned images and use the IRIS optical character recognition (OCR) software to convert a scanned page into editable text.

The scanner's TWAIN interface was irritating to use and hid a number of useful settings, such as the option to increase the colour depth of scans, in the Preferences menu. Most annoying of all, the TWAIN interface closes after each scan and doesn't retain either previews or settings, which can make scanning multiple documents very tedious. You can set the software to stay open after each scan, but this works only if you're using Solution Center and not scanning from a third-party application such as Photoshop Elements. We also had problems with the auto-crop feature, which is supposed to crop the scan area to fit your document. It often got this wrong, selecting a 6x4in area of an A4 document, for example.

With a low optical resolution of 1,200x1,200dpi, scan quality was unremarkable. We found that bright colours on original documents looked faded in our scans, and fine detail looked fuzzy in our highest-resolution scans. The Scanjet G2410 was also one of the slowest scanners here, taking more than a minute to scan a single 6x4in photo. We were more impressed with the OCR software, which accurately converted a scanned A4 document into text. If this is the primary reason you want a scanner, the Scanjet G2410 is unbeatable value.

For basic photo scanning, where you're not overly bothered about the sharpest, brightest results, this scanner is good value, and its powerful OCR software makes it suitable for office work, too. It's slow, however, and its poor colour reproduction and low scan resolution mean that there are better choices for photo work.

SUMMARY

- ✓ Excellent value
- ✗ Slow scan speeds
- ✗ Poor interface software

CCD FLATBED SCANNER 1,200x1,200dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE L2694A
DETAILS www.hp.co.uk



CANON CanoScan LiDE 90

★★★★

£46 inc VAT

From www.microwarehouse.co.uk

Although it costs just £8 more than HP's Scanjet G2410, Canon's CanoScan LiDE 90 looks better and has higher specifications. It's compact and unobtrusive, with slim lines and a metallic finish. A detachable stand allows it to be used propped on its side, but we found that positioning pages correctly was difficult with the scanner in this position.

The lid has a neatly designed hinge that swivels and lifts, enabling you to scan pages from thick books. Counterintuitively, you have to scan pages upside down, with the top of the page at the bottom edge of the scanner.

The scanner is USB powered, which cuts down on the number of cables you have to trail across your desk. We were surprised to see that it uses a mini-USB port like those found on digital cameras, but the necessary USB cable was provided in the box.

The LiDE 90 has a respectable maximum resolution of 2,400x4,800dpi, but the higher the scan resolution you choose, the longer the scan takes: at 600dpi a 6x4in photo took just 18 seconds to scan, while at 1,200dpi the same photo took four-and-a-half minutes.

Fortunately, the quality of scans was very high. Tiny details were captured accurately at high resolutions, and colours were generally very faithful to those of the originals, although some shades were not quite as vivid. There's no option for scanning film or transparencies, though, so this scanner is limited to standard documents, photos and books.

The LiDE 90 comes with a basic range of software, including a utility for configuring its four automatic scan buttons, the rather poor ScanSoft OmniPage SE OCR software, which failed to produce accurate results, and ArcSoft's PhotoStudio image-editing package. Canon's excellent TWAIN interface doesn't skimp on features, though, with an advanced mode that provides control over every aspect of the process.

The LiDE 90 is a good budget scanner for home use, producing excellent scans at high resolutions. Its poor software, particularly for OCR, and slow speeds at high resolution are frustrating, though.

SUMMARY

- ✓ Great value
- ✓ Excellent interface software
- ✗ Slow scan speed at high resolution

CIS FLATBED SCANNER 2,400x4,800dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE 2167B010AA
DETAILS www.canon.co.uk



HP Scanjet G2710

★★★★

£52 inc VAT

From www.lambda-tek.com/componentshop

HP's Scanjet G2710 is the cheapest scanner here that can scan transparencies. It also has the smallest transparency scanning unit on test, which can handle only two frames of 35mm film or two 35mm slides. This unit is built into the lid, so there are no awkward negative holders to deal with. Unfortunately, it'll still take a long time to scan your entire negative collection two at a time, particularly as HP's scanner interface software doesn't let you scan each frame as a separate image.

As with HP's cheaper Scanjet G2410, the G2710's intensely annoying TWAIN interface made scanning more difficult. It doesn't retain settings or previews between sessions, and insists on closing after each scan if you use it with third-party graphics software. Alternatively, you can use the three buttons on the lid to scan an image instantly without first opening a graphics program, either producing an image file or a PDF, or sending it directly to a printer.

Scan speeds were quick for the most part, but turning the scanner up to its maximum resolution of 2,400x4,800dpi slowed it to a crawl. Scanning a single 35mm negative at this resolution took five-and-a-half minutes, which was almost five times as long as Epson's similarly priced Perfection V200 scanner. The results weren't as good, either, with scans lacking the sharp detail of those made with Epson's scanner.

Document scans were very good, and even the smallest type on original documents was clear when scanned. Colour reproduction on both our photo and document scans was excellent, with impressive pale shades, flesh tones, dark greys and blacks.

The Scanjet G2710 is the cheapest scanner here that can handle transparencies, but this feels like an afterthought. The slow scan speeds at the top resolution, two-frame slide scanner and poor reproduction of fine detail make Epson's Perfection V200 Photo a better choice for scans. That said, for office documents this scanner is quick and accurate, and comes with the excellent IRIS OCR software.

SUMMARY

- ✓ Great value
- ✓ Excellent colour reproduction
- ✗ Poor interface software

CCD FLATBED SCANNER 2,400x4,800dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE L2696A
DETAILS www.hp.co.uk



EPSON Perfection V200 Photo

★★★★★

£60 inc VAT
From www.fotosense.co.uk



Epson's Perfection V200 is the second cheapest scanner here that can scan 35mm negatives and 35mm slides, as well as regular documents. Despite its low price it comes with a transparency frame that can hold six 35mm negatives or four 35mm slides, and has a high optical resolution of 3,200x9,600dpi.

The interface is well designed and has been optimised for scanning film. Previews of each frame appear as separate thumbnails, so you can scan each picture from a strip separately.

In Professional mode, the interface provides a great deal of control over your final image. It includes a full range of resolutions, tone and image correction options, including software-based dust removal to correct scans of dirty or damaged negatives. Auto and Home modes provide a limited set of options for those who simply want to make scans quickly and easily.

Colours were among the most accurate here, with particularly good reproduction of pale and bright tones, although deep shadows were less well defined. We were also pleased with the sharp reproduction of fine detail in our high-resolution photo scans and five-point text in our 300dpi font size test. Our negative scans were bright and beautifully coloured, although the maximum optical resolution of 3,200dpi may be a limitation if you want to make particularly big enlargements.

The bundled software includes ArcSoft Photolmpression for basic image editing and management, and the ABBYY FineReader 6 OCR package. This made a couple of errors that the IRIS OCR software included with HP's scanners had avoided, but we were generally pleased with the quality of text recognition.

The Perfection V200 Photo produced the best results we've seen from a scanner that costs under £100. Scans were sharp, accurate and fast. The maximum resolution of 3,200dpi is plenty for photo scanning, and the brightness and vivid colouring of our transparency scans was unmatched by any other scanner here. This is a great scanner at an excellent price.

SUMMARY

- ✓ Great value
- ✓ Accurate colour reproduction
- ✓ Excellent interface software

CDD FLATBED SCANNER 3,200x9,600dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE B11B188032
DETAILS www.epson.co.uk



CANON LiDE 600F

★★★★★

£89 inc VAT
From www.microwarehouse.co.uk

Canon's CanoScan LiDE 600F combines a slim design and power efficiency with a very respectable resolution of 4,800x9,600dpi. Its metallic styling is in the same vein as the LiDE 90, but a more effective fold-out stand means it can be used in an upright position, and its hinged lid opens like a book, making this one of the most well-designed scanners here.

Rather than having a transparency scanning backlight in the lid, the scanner comes with a separate Film Adapter Unit. This clips neatly into place against the scanner's glass, but it accepts only strips of 35mm film, not slides. Film can be fiddly to position, too. Even with this extra unit plugged in, though, the scanner is powered through its USB connection, thanks to its use of a low-energy CIS sensor.

The LiDE 600F produced extremely sharp images, particularly at high resolutions, with the level of visible detail in scanned photos outstripping that of even Canon's more expensive CanoScan 8800F. Our negative scans also benefited from this clarity. Colours in our transparency scans were warm and realistic but looked a little dull and murky compared with scans made by Epson's Perfection V200 Photo, even when we used the FARE infrared dust, scratch and backlight correction feature.

The scanner benefits from Canon's excellent interface software, which retains previews and settings and provides a great deal of control over image quality. For document processing and OCR, Canon provides ScanSoft OmniPage SE. This did a passable job of document management, but was fairly poor at converting a scanned document to text, failing to include the entire page and placing text from different columns in the wrong order.

The LiDE 600F looks great and makes few compromises on quality, putting in an outstanding performance in our tests, from text documents to high-resolution transparency scans. It's an excellent scanner and an ideal choice if you're short on space, but we preferred the quality of the colour produced by Epson's less expensive Perfection V200 Photo, and the lack of slide support is disappointing.

SUMMARY

- ✓ Excellent interface software
- ✓ Sharp reproduction of fine detail
- ✗ Slightly dull colour reproduction

CIS FLATBED SCANNER 4,800x9,600dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE 0302B010AA
DETAILS www.canon.co.uk



CANON CanoScan 8800F

★★★★★

£115 inc VAT
From www.lambda-tek.com/componentsshop

Canon's CanoScan 8800F is the company's top-of-the-range scanner, and comes with suitably high-end software, including Adobe Photoshop Elements. It uses CCD rather than CIS scan technology, which makes it bulkier and more power hungry than the other Canon scanners here, but it should produce brighter, more accurately coloured images.

The CanoScan 8800F has separate holders for different sizes of film. These can hold two six-frame strips of 35mm film, four slides or three frames of 120 format film. Canon's FARE feature detects and eliminates dust and minute scratches from film, although enabling it can more than double scan times.

Transparency scans were particularly smooth and sharp. At default settings, they were more warmly coloured but darker than negative scans from Epson's Perfection V200. The excellent interface made it easy to tweak our settings, although a colour inversion option on the preview screen would have made it easier to work out optimal settings for negative scanning. Sadly, despite the beautifully smooth scan quality, we couldn't produce negative scans that equalled the bright, clear colouring of those made by the Perfection V200, and many of our images were underexposed.

This didn't affect photo scans, which were generally sharp, bright and accurately coloured, while 150 and 300dpi A4 document scans were easy to read. In its normal reflective scan mode for photos and documents, the interface's pull-down menu offers resolutions up to just 1,200dpi. Higher resolutions have to be entered manually, but this is a minor inconvenience. Scans were quick, particularly for transparencies, and it took just over two-and-a-half minutes to scan a frame of film at the maximum resolution of 4,800dpi.

The 8800F produced astonishingly smooth high-resolution scans, but transparency scans lacked the vibrant colour of those from Epson's Perfection V200, which is half the price. However, the 8800F is a good choice if you need the higher resolution and have the time to adjust your images before or after scanning.

SUMMARY

- ✓ Excellent interface software
- ✓ Sharp reproduction of fine detail
- ✗ Slightly dull colour reproduction

CCD FLATBED SCANNER 4,800x9,600dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE 2168B008AA
DETAILS www.canon.co.uk



PLUSTEK OpticBook 3600

★★★★

£134 inc VAT

From www.bmisolutions.co.uk

While most of the scanners here have been designed to make high-quality copies of photos and film, Plustek's OpticBook 3600 was built with a different purpose in mind: scanning documents as quickly and easily as possible.

The scanner sits higher off the table than most, and its platen extends all the way to the front edge. This means you can hold the pages of books flat against the glass without bending their spines. The hinges of the scanner's lid can rise over an inch and a half, providing enough room for even the thickest textbooks.

Unfortunately, the scanner's interface looks dated, with indecipherable icons. Only the text information that pops up when you hover your mouse over them makes them usable. The imprecise auto-crop function doesn't help, and sometimes failed to recognise the dimensions of the document we were scanning.

The interface is tailored for scanning documents and includes tools for this purpose, such as a Descreen Filter to reduce interference patterns when scanning documents that use half-tone printing. Be careful, though, as using this option with high-quality originals will make the scan look blurry. The maximum resolution of 1,200dpi is sufficient for photo scanning, and produced reasonably detailed, accurately coloured images.

As the OpticBook's main purpose is scanning documents, it comes with ABBYY's decent FineReader 5 OCR package, but the limited and confusing Presto! PageManager document management application leaves a lot to be desired. The scanner is also not that quick for a device designed for documents, taking a similar amount of time to scan an A4 document at 600dpi as Epson's significantly cheaper Perfection V200 Photo.

With better software, this scanner could have been an excellent tool for anyone who wants to copy and assemble research material, clippings of published work or even their comic book collection, but the poor document management application and primitive interface mean it's only worth buying if you need to scan a lot of books or magazines and already have the appropriate software.

SUMMARY

- ✓ Easy to scan books
- ✓ Good scan quality
- ✗ Poor software

CCD FLATBED SCANNER 1,200dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE OPTICBOOK3600
DETAILS www.plustek.com



AVISION FB2080E

★★★

£236 inc VAT and delivery

From www.geizzentrale.de

Avision's FB2080E scanner is available only from European retailers, but the supplier listed here has an English-language website, too. Like Plustek's OpticBook 3600, this scanner has been designed to scan books without damaging them. Unfortunately its lid doesn't rise high enough to accommodate thick books, and isn't heavy enough to remain securely in place when its hinges have been lifted out of their runners. This makes it hard to get scans with clean, sharp edges.

A function button on the scanner lets you rotate through auto-scan presets denoted by numbers on a tiny mono LCD screen.

The interface application is well designed, retains its settings between scans and has a remarkably accurate auto-crop feature. It can be rather deceptive, though, as many of the listed options are greyed out. This is because the scanner shares its software with other products that offer a wider range of functions, such as duplex and automatic document feed scanning. The electronic manual also refers to many features this scanner lacks, while the printed manual even begins by congratulating you on your purchase of a duplex scanner.

Once we'd got past this confusion, the FB2080E worked well, producing the fastest 150 and 300dpi scans here. Lettering in our small-font-size test was sharp and clear, and our illustrated documents were legible and accurately coloured. Photo scans made at the maximum resolution of 600dpi looked reasonably good, but colour reproduction wasn't as accurate as from most of the other scanners in the group. The automatic de-skew function didn't work very well, either.

Avision's FB2080E is disappointing. It's over £100 more expensive than Plustek's OpticBook 3600, but isn't as well designed for scanning books, as the light lid doesn't hold objects in place. With a low maximum scan resolution of just 600dpi and poor colour reproduction, it's hard to understand why this scanner is so expensive. Its fairly significant flaws make the high price impossible to forgive. Plustek's scanner is a better choice for scanning lots of documents.

SUMMARY

- ✗ Confusing manual
- ✗ Difficult to position media correctly
- ✗ Expensive

CCD FLATBED SCANNER 600dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE 4719868531378
DETAILS www.avision.com



HP Scanjet 5590

★★★★

£256 inc VAT

From www.lambda-tek.com/componentshop

HP's bulky Scanjet 5590 aims to combine all the best features of a high-resolution transparency scanner, a fast business scanner and a photo-friendly flatbed.

It comes with both Standard and Commercial drivers. The Standard interface is the same as those on the other HP scanners in the group, with various photo and transparency scanning options. It was just as irritating to use, closing after each scan, and didn't retain its settings between scans. The Commercial driver is easier to use, doesn't close between scans and offers control over the duplex scanning options and the automatic document feed (ADF), but can't control the transparency unit.

Like Canon's LiDE 600F, this scanner has a separate transparency adaptor that has to be plugged into the scanner, loaded with film or slides and placed directly on the platen. At 2,400dpi, the Scanjet 5590 had the slowest scan time of any scanner here, taking almost nine minutes to scan a single frame of 35mm film. The result was clear and bright but looked rather cold, with a marked blue tint. Dark and pure white colours in our photos were accurate, but very faint shades of other colours came out as white.

The scanner really only excelled at low-resolution document reproduction. It produced the group's sharpest results in our 300dpi small-font test, and our illustrated A4 documents were captured perfectly.

The 50-page ADF performed 150dpi scans at a rate of four pages a minute, and is even capable of duplex scanning, although it has to draw the page in twice to scan both sides. Its software includes the full version of the Readiris Pro 11 OCR program, which has more options than the version that's integrated into the software of the cheaper HPs in the group.

The Scanjet 5590 is a very capable text scanner with a well-designed Commercial driver and a fast, efficient ADF. With a maximum resolution of just 2,400dpi and an annoying Standard interface, it fails as a negative scanner, but its capable document handling makes it a viable office machine.

SUMMARY

- ✓ Excellent document scanning
- ✗ Expensive
- ✗ Slow, inaccurately coloured negative scans

CCD FLATBED SCANNER 2,400x2,400dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE L1910A
DETAILS www.hp.co.uk

FLATBED SCANNERS



MANUFACTURER	HP	CANON	HP	EPSON	CANON	CANON	PLUSTEK	AVISION	HP
Model	Scanjet G2410	CanoScan LiDE 90	Scanjet G2710	Perfection V200 Photo	LiDE 600F	CanoScan 8800F	OpticBook 3600	FB2080E	Scanjet 5590
Rating	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★	★★★★
TESTED SCAN SPEEDS									
Full scan area preview	8s	13s	11s	7s	11s	9s	7s	7s	7s
A4 document at 150dpi	30s	13s	11s	13s	13s	10s	19s	9s	9s
A4 document at 300dpi	45s	18s	25s	17s	21s	18s	20s	10s	16s
6x4in print at 600dpi	1m 1s	18s	29s	14s	16s	15s	19s	19s	21s
6x4in print at 1,200dpi	2m 7s	4m 32s	1m 20s	40s	52s	1m 0s	49s	N/A	1m 11s
Single 35mm negative at 2,400dpi	N/A	N/A	5m 30s	1m 28s	1m 31s	1m 20s	N/A	N/A	8m 53s
Single 35mm negative at maximum dpi	N/A	N/A	5m 30s	2m 46s	6m 39s	2m 34s	N/A	N/A	8m 53s
SPECIFICATIONS									
Scanner technology	CCD	CIS	CCD	CCD	CIS	CCD	CCD	CCD	CCD
Optical resolution	1,200x1,200dpi	2,400x4,800dpi	2,400x4,800dpi	3,200x9,600dpi	4,800x9,600dpi	4,800x9,600dpi	1,200dpi	600dpi	2,400x2,400dpi
Maximum interpolated resolution	999,999dpi	19,200dpi	999,999dpi	12,800dpi	19,200dpi	19,200dpi	24,000dpi	Not stated	999,999dpi
Colour depth (output)	48-bit	48-bit	48-bit	48-bit	48-bit	48-bit	48-bit	48-bit	48-bit
Greyscale depth (output)	8-bit	8-bit	8-bit	16-bit	16-bit	16-bit	16-bit	8-bit	8-bit
Maximum document size	216x297mm	216x297mm	216x297mm	216x297mm	216x297mm	216x297mm	216x297mm	210x297mm	216x297mm
Film formats accepted	None	None	35mm film, 35mm slide	35mm film, 35mm slide	35mm film	35mm film, 35mm slide, 120 format (max 6x22cm)	None	None	35mm film, 35mm slide
Maximum transparency size	N/A	N/A	2x 35mm film or 2x 35mm slide	6x 35mm film or 4x 35mm slides	6x 35mm film	12x 35mm film, 4x 35mm slide or 120 format	N/A	N/A	4x 35mm film, 3x 35mm slide
Function buttons	2	4	3	4	7	7	5	3	5
Scan head lock	None	Manual	None	None	Manual	Manual	Manual	Manual	None
USB powered	No	Yes	No	No	Yes	No	No	No	No
Supplied software	HP Photosmart (integrated OCR)	ScanGear, MP Navigator EX, Solution Menu, ScanSoft OmniPage SE, Presto! PageManager, ArcSoft PhotoStudio	HP Photosmart (integrated OCR)	ArcSoft Photolmpression 5, ABBYY FineReader Sprint 6 Plus, Epson Creativity Suite	ScanGear, MP Navigator EX, Solution Menu, ScanSoft OmniPage SE, Presto! PageManager, ArcSoft PhotoStudio	ScanGear, MP Navigator EX, Solution Menu, OmniPage SE, ArcSoft PhotoStudio, Presto! PageManager (PC only), Adobe Photoshop Elements 5.0 (PC) and 4.0 (Mac), SilverFast SE	Plustek BookPilot, ABBYY FineReader Sprint 5, NewSoft Presto! PageManager, NewSoft Presto! PageFolio	PaperPort 9.0, PhotoSuite, AVScan, AVCapture, Button Manager	HP Photosmart, Readiris Pro 1.1
PHYSICAL									
USB cable supplied	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interface	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed	USB Hi-Speed
Dimensions (HxWxD)	62x275x458mm	40x250x364mm	65x287x450mm	57x280x430mm	43x286x409mm	100x275x479mm	105x285x453mm	135x589x428mm	162x340x488mm
Weight	2.2kg	1.6kg	3.1kg	2.6kg	2.6kg	4.2kg	3.9kg	7.0kg	5.7kg
BUYING INFORMATION									
Supplier	www.rlsupplies.co.uk	www.microwarehouse.co.uk	www.lambda-tek.com/componentshop	www.fotosense.co.uk	www.microwarehouse.co.uk	www.lambda-tek.com/componentshop	www.bmisolutions.co.uk	www.geizzentrale.de	www.lambda-tek.com/componentshop
Price inc VAT	£38	£46	£52	£60	£89	£115	£134	£236	£256
Details	www.hp.co.uk	www.canon.co.uk	www.hp.co.uk	www.epson.co.uk	www.canon.co.uk	www.canon.co.uk	www.plustek.com	www.avision.com	www.hp.co.uk
Part code	L2694A	2167B010AA	L2696A	B11B188032	0302B010AA	2168B008AA	OPTICBOOK3600	4719868531378	L1910A

Labs verdict Flatbed scanners

If you want the best photo and film scans, Canon's CanoScan 8800F and LiDE 600F are both good options. They produced incredible results at their highest resolution of 4,800x9,600dpi, but we found that correcting colour adjustment manually took a great deal of time and delicacy. The LiDE 600F is also a great choice if you want a small scanner that can easily be stored away. Its integrated stand means that you can use it on its side to save

space, and it is USB powered, which cuts down on cables and clutter on your desk.

We loved Epson's Perfection V200, which is one of the cheapest scanners in the group at just £60. It has a respectable maximum resolution of 3,200x9,600dpi. Its colour accuracy is outstanding, and it comes equipped to scan slides and 35mm film. It may not have the same high resolution as Canon's scanners, but its pin-sharp images mean you get very



high-quality results. Scan times were impressive for film and documents, too. It's our clear Best Buy. **CS**